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EXAMINER	
PHAN, HUY Q	
ART UNIT	**PAPER NUMBER**
2687	

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/913,457	NAGHIAN, SIAMAK	
	Examiner	Art Unit	
	Huy Q Phan	2687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-63 and 68-90* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18,20-22,25-33,35-48,56-59,68,69,73,75,76,79-81,83-85,88 and 90* is/are rejected.

7)☒ Claim(s) *19,23,24,34,49-55,60-63,70-72,74,77,78,82,86 and 87* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-63 and 68-90 in the reply filed on 02/10/2005 is acknowledged.

Response to Amendment

2. This Office Action is in response to Amendment filed on date: 10/08/2004.

Claims 1-63 and 68-90 are still pending.

Response to Arguments

3. Applicant's arguments with respect to claims 1-63 and 68-90 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-6, 9, 11, 13-18, 20-22, 25-30, 33, 35, 39, 40, 42 43, 46-48, 56, 57, 68, 69, 73, 75, 76, 79-81, 83-85, 88 and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yun et al. (US-5,886,988) in view of Khan et al. (US-6,400,954).

Regarding claim 1, Yun et al. disclose a method for admission control in a cellular telecommunication system (fig. 7, step 700), comprising the steps of:

receiving a bearer request (inherently to determination for assignment of new connection; see col. 22, lines 4-9);

checking current load (fig. 7, step 712; and see col. 22, lines 40-41);

calculating preliminary load estimate based at least on the current load and said bearer request (fig. 7, steps 711-713; and see col. 22, lines 38-42); and

if said preliminary load estimate is lower than a predetermined limit (fig. 7, step 713 "NO" to step 714; and see col. 22, lines 42-43) performing the steps of:

admitting said bearer request (fig. 7, step 714; and see col. 22, lines 42-43);

allocating transmission resources according to said request (col. 22, lines 4-46); and

checking the resulting load (fig. 7, step 712; and see col. 22, lines 40-41); if said preliminary load estimate is higher than said predetermined limit (fig. 7, step 713 "YES" to step 715; and see col. 22, lines 43-44). But, Yun et al. do not particularly show performing the step of attempting the release of transmission capacity resources of the cellular telecommunication system in order to bring the resulting load under said predetermined limit thereby allowing admittance of said requested bearer. However in analogous art, Khan et al. teach performing the step of attempting the release of

transmission capacity resources (fig. 3, steps 46 or 48) of the cellular telecommunication system in order to bring the resulting load under said predetermined limit (col. 5, lines 29-40) thereby allowing admittance of said requested bearer (fig. 3, step 44). Since, Yun et al. and Khan et al. are related to the method for admission control in the cellular telecommunication system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Yun et al. as taught by Khan et al. for purpose of increasing advantageously the chances of making new connection in order to maximize the functionality and profitability of wireless communication system.

Regarding claim 2, Yun et al. and Khan et al. disclose the method according to claim 1. Khan et al. further disclose wherein if, after performing the steps of allocating transmission resources and checking the resulting load when the preliminary load estimate is lower than the predetermined limit (inherently to "access network has sufficient capacity"; see col. 5, lines 14-28), the resulting load is larger than said predetermined limit (inherently to "sufficient access network resources are not available"; see col. 5, lines 29-40), the method further comprises the step of: modifying the parameters of at least one bearer in order to bring the resulting load under said predetermined limit (fig. 3, steps 46 or 48; see col. 5, lines 29-40).

Regarding claim 3, Yun et al. and Khan et al. disclose the method according to claim 1. Yun et al. further disclose wherein after said step of attempting the release of

transmission capacity resources when the preliminary load estimate is higher than the predetermined limit, the method further comprises the steps of:

checking the current load (fig. 7, step 712; and see col. 22, lines 40-41);

calculating a resulting load estimate based at least on the current load and the bearer request (fig. 7, steps 711-713; and see col. 22, lines 38-42); and

if said resulting load estimate is lower than the predetermined limit (fig. 7, step 713 "NO" to step 714; and see col. 22, lines 42-43), performing the steps of:

admitting the bearer request (fig. 7, step 714; and see col. 22, lines 42-43);

allocating transmission resources according to said request (col. 22, lines 4-46); and

checking the resulting load (fig. 7, step 712; and see col. 22, lines 4-46).

Regarding claim 4, Yun et al. and Khan et al. disclose the method according to claim 3. Khan et al. further disclose wherein, if the resulting load is larger than said predetermined limit (inherently to "sufficient access network resources are not available"; see col. 5, lines 29-40), the method further comprises the step of: modifying the parameters of at least one bearer in order to bring the resulting load under said predetermined limit (fig. 3, steps 46 or 48; see col. 5, lines 29-40).

Regarding claim 5, Yun et al. and Khan et al. disclose the method according to claim 1. Khan et al. further disclose wherein the step of attempting the release of

transmission capacity resources (fig. 3, steps 46 or 48; see col. 5, lines 29-40) comprises the steps of:

modifying the bearer request to thereby lower the amount of resources required by the request (fig. 3, steps 46 or 48; and see col. 5, lines 14-40);

checking current load (fig. 3, step 42; and see col. 5, lines 14-40);

calculating a resulting load estimate based at least on the current load and said modified bearer request (fig. 3, step 42; and see col. 5, lines 14-40); and

if said resulting load estimate is lower than the predetermined limit (fig. 3, step 42 "YES" to step 44; and see col. 5, lines 14-40) performing the steps of:

admitting said modified bearer request (fig. 3, step 44; and see col. 5, lines 14-40);

allocating transmission resources according to said bearer request (fig. 3, step 44; and see col. 5, lines 14-40); and

checking the resulting load (fig. 3, step 42; and see col. 5, lines 14-40).

Regarding claim 6, Yun et al. and Khan et al. disclose the method according to claim 5. Khan et al. further disclose wherein if the resulting load is larger than said predetermined limit (inherently to "sufficient access network resources are not available"; see col. 5, lines 29-40), the method further comprises the step of: modifying the parameters of at least one bearer in order to bring the resulting load under said predetermined limit (fig. 3, steps 46 or 48; see col. 5, lines 29-40).

Regarding claim 9, Yun et al. and Khan et al. disclose the method according to claim 1. Khan et al. further disclose wherein said step of attempting the release of transmission capacity resources comprises the step of a adjusting load control parameters of the cellular network (fig. 3, steps 46 or 48; and see col. 5, lines 14-40).

Regarding claim 11, Yun et al. and Khan et al. disclose the method according to claim 3. Yun et al. further disclose wherein, if the resulting load is larger than said predetermined limit, the method further comprises the step of: rejecting the bearer request (col. 7, lines 4-17).

Regarding claim 13, Yun et al. and Khan et al. disclose the method according to claim 4. Khan et al. further disclose wherein the at least one bearer is the requested bearer (col. 5, lines24-28).

Regarding claim 14, Yun et al. and Khan et al. disclose the method according to claim 1. Khan et al. further disclose selecting at least one cellular network parameter or at least one type of cellular network parameter to modify (fig. 3, steps 46 or 48; and see col. 5, lines 14-40).

Regarding claim 15, Yun et al. and Khan et al. disclose the method according to claim 14. Khan et al. further disclose wherein the selecting step is performed

according to a criteria dependent on the requirements of the particular application (fig. 3, steps 46 or 48; and see col. 5, lines 14-40).

Regarding claim 16, Yun et al. and Khan et al. disclose the method according to claim 14. Khan et al. further disclose wherein the selecting step is performed according to the amount the preliminary load estimate exceeds the predetermined limit (fig. 3, steps 46 or 48; and see col. 5, lines 14-40).

Regarding claim 17, Yun et al. and Khan et al. disclose the method according to claim 14. Khan et al. further disclose wherein the selection is random (col. 5, line 12).

Regarding claim 18, Yun et al. and Khan et al. disclose the method according to claim 14. Khan et al. further disclose wherein cellular network parameters which do not substantially affect a type of bearer are preferentially selected (col. 4, line 63-col. 5, line 62).

Regarding claim 20, Yun et al. and Khan et al. disclose the method according to claim 14. Khan et al. further disclose wherein power control parameters, load control parameters, soft handover margins, soft capacity margins, handover control parameters, and/or parameters of the bearer request comprise types of cellular network parameters (col. 4, lines 45-62).

Regarding claim 21, Yun et al. and Khan et al. disclose the method according to claim 14. Khan et al. further disclose wherein said step of attempting the release of transmission capacity resources further comprises the steps of:

modifying the selected at least one cellular network parameter or type of cellular network parameter (fig. 3, steps 46 or 48; and see col. 5, lines 14-40);

checking the current load (fig. 3, step 42; and see col. 5, lines 14-40);

calculating a resulting load estimate based at least on the current load and the bearer request (fig. 3, step 42; and see col. 5, lines 14-40); and

if said resulting load estimate is lower than the predetermined limit (fig. 3, step 42 "YES" to step 44; and see col. 5, lines 14-40), admitting the bearer request (fig. 3, step 44; and see col. 5, lines 14-40).

Regarding claim 22, Yun et al. and Khan et al. disclose the method according to claim 21. Khan et al. further disclose wherein, if said resulting load estimate is higher than the predetermined limit (inherently to "sufficient access network resources are not available"; see col. 5, lines 29-40), said step of attempting the release of transmission capacity resources (fig. 3, steps 46 or 48; and see col. 5, lines 14-40) further comprises the step of : selecting, again, at least one cellular network parameter or type of cellular network parameter to modify (col. 5, lines 3-13).

Regarding claim 25, Yun et al. and Khan et al. disclose the method according to claim 1. Khan et al. further disclose wherein said step of attempting the release of

transmission capacity resources comprises the step of: modifying a first type of cellular network parameter (fig. 3, steps 46 or 48; and see col. 5, lines 14-40); wherein power control parameters, load control parameters, soft handover margins, soft capacity margins, handover control parameters and/or parameters of the bearer request comprise types of parameters (col. 4, lines 45-62).

Regarding claim 26, Yun et al. and Khan et al. disclose the method according to claim 25. Khan et al. further disclose wherein said step of attempting the release of transmission capacity resources (fig. 3, steps 46 or 48; and see col. 5, lines 14-40) and Yun et al. disclose checking the current load; calculating a resulting load estimate based at least on the current load and the bearer request; and if said resulting load estimate is lower than the predetermined limit, admitting the bearer request (fig. 7, steps 711-714).

Regarding claim 27, Yun et al. and Khan et al. disclose the method according to claim 26. Khan et al. further disclose wherein, if said resulting load estimate is higher than the predetermined limit, said step of attempting the release of transmission capacity resources further comprises the step of: modifying a second type of parameter (fig. 3, steps 46 (first type) or 48 (second type); and see col. 5, lines 14-40).

Regarding claim 28, Yun et al. and Khan et al. disclose the method according to claim 1. Khan et al. further disclose wherein the current load, preliminary load estimate, and the resulting load are determined for a control area, said control area being a region

of the cellular telecommunication system controlled by an admission control entity (col. 4, lines 4-62).

Regarding claim 29, Yun et al. and Khan et al. disclose the method according to claim 28. Khan et al. further disclose wherein said control area comprises a sector of a cell, a cell, a plurality of cells, a routing area, and/or an entire radio access network (col. 4, lines 4-62).

Regarding claim 30, Yun et al. and Khan et al. disclose the method according to claim 29. Khan et al. further disclose wherein a transmission load capacity of the control area has a stable load region, within which the system can handle all traffic, a critical load region above the stable load region, and an overload region above the critical load region (col. 4, lines 4-62).

Regarding claim 33, Yun et al. and Khan et al. disclose the method according to claim 28. Yun et al. further disclose wherein the preliminary load estimate is calculated in terms of transmission power capacity in the control area (fig. 7, step 721, see col. 22, lines 30-37).

Regarding claim 35, Yun et al. and Khan et al. disclose the method according to claim 1. Khan et al. further disclose wherein the transmission resources comprise

radio resources, logical resources, codes, and/or transmission capacity (col. 5, lines 3-40).

Regarding claim 39, Yun et al. and Khan et al. disclose the method according to claim 1. Yun et al. further disclose wherein the step of receiving a bearer request comprises the step of: receiving, by an admission control entity, a bearer request message (fig. 3a, step 303, see col. 18, lines 44-62).

Regarding claim 40, Yun et al. and Khan et al. disclose the method according to claim 39. Yun et al. further disclose wherein the step of checking current load comprises the steps of: transmitting, by the admission control entity, a message requesting load information to a load control entity; and receiving, by the admission control entity, a message comprising current load information from the load control entity (figs. 3a and 7).

Regarding claim 42, Yun et al. and Khan et al. disclose the method according to claim 2. Khan et al. further disclose wherein the step of modifying the parameters of at least one bearer (fig. 3, step 46) in order to bring the resulting load under the predetermined limit comprises the step of: transmitting, by an admission control entity, a message to a power control entity, wherein said message comprises an instruction to change at least one power control parameter (col. 4, lines 45-62).

Regarding claim 43, Yun et al. and Khan et al. disclose the method according to claim 2. Yun et al. further disclose wherein the step of modifying the parameters of at least one bearer in order to bring the resulting load under the predetermined limit comprises the step of: transmitting, by an admission control entity, a message to a handover control entity, wherein said message comprises an instruction to change at least one handover control parameter (col. 22, lines 38-52).

Regarding claim 46, Yun et al. and Khan et al. disclose the method according to claim 1. Khan et al. further disclose wherein said step of attempting the release of transmission capacity resources comprises the step of : negotiating (either step 46 or 48; fig. 3), by an admission control entity, with a bearer management entity in order to reduce the resources required by the requested bearer (col. 5, lines 14-67).

Regarding claim 47, Yun et al. and Khan et al. disclose the method according to claim 2. Khan et al. further disclose wherein said step of modifying the parameters of at least one bearer (fig. 3, step 46) in order to bring the resulting load under said predetermined limit comprises the steps of: negotiating, by an admission control entity, with a bearer management entity in order to reduce the resources required by the requested bearer; and/or negotiating (fig. 3, steps 46 or 48; and see col. 5, lines 14-40), by the admission control entity, with the bearer management entity in order to reduce the resources required by one or more bearers other than the requested bearer (col. 4, lines 45-62).

Regarding claim 48, Yun et al. and Khan et al. disclose the method according to claim 1. Khan et al. further disclose wherein the cellular telecommunication system comprises at least one mobile station having a multidiversity connection (col. 4, lines 1-5 and fig. 2).

Regarding claim 56, Yun et al. disclose a cellular telecommunication system comprising:

an admission control entity for controlling admissions of new bearers in a control area of the cellular telecommunication system (col. 21, line 66-col. 22, line 22), wherein, when said admission control entity receives a bearer request, said admission control entity checks a current load in the control area and calculates a preliminary load estimate based at least on the current load and said bearer request (col. 21, line 66-col. 22, line 22); and wherein, if said preliminary load estimate is lower than a predetermined limit, said bearer request is admitted and transmission resources of the control area are allocated according to said request, after which the admission control entity checks the resulting load in the control area (fig. 7, and col. 22, lines 9-11).

But, Yun et al. do not particularly show wherein, if said preliminary load estimate is higher than said predetermined limit, the admission control entity attempts to release transmission capacity resources of the control area in order to bring the resulting load under said predetermined limit thereby allowing admittance of said requested bearer. However, Khan et al. teach wherein, if said preliminary load estimate is higher than said

predetermined limit (inherently to "sufficient access network resources are not available"; see col. 5, lines 29-40), the admission control entity attempts to release transmission capacity resources of the control area (fig. 3, steps 46 or 48; see col. 5, lines 29-40) in order to bring the resulting load under said predetermined limit thereby allowing admittance of said requested bearer (fig. 3, step 44); therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Yun et al. as taught by Khan et al. for purpose of increasing advantageously the chances of making new connection in order to maximize the functionality and profitability of wireless communication system.

Regarding claim 57, Yun et al. and Khan et al. disclose the system according to claim 56. Yun et al. further disclose a bearer management entity for managing bearer in the control area, for transmitting a bearer request message to the admission control entity, for receiving an acknowledgment message from the admission control entity, and for admitting the bearer of the bearer request based on the received acknowledgment message (fig. 7 and its description).

Regarding claim 68, Yun et al. disclose a method for admission control in a control area of a cellular telecommunication system (fig. 7 and its description) comprising the steps of:

whenever a request for the admittance of a new bearer is received, estimating a result of the admittance of the new bearer on the available capacity of the control area (fig. 7, steps 711 and 712);

if the estimated results show that a stable load capacity threshold will not be exceeded by the admittance of the new bearer ("NO" at step 713 of fig. 7), admitting said bearer and allocating transmission resources according to said request (fig. 7, step 714);

whenever a new bearer is admitted, determining an actual result of the admittance of the new bearer on the available capacity of the control area (fig. 7, steps 711 and 712); and

if either (i) the estimated results show that the stable load capacity threshold will be exceeded by the admittance of the new bearer ("YES" at step 713 of fig. 7), or (ii) the determined actual results show that the stable load capacity threshold was exceeded by the admittance of the new bearer (fig. 7, steps 711 and 713).

But, Yun et al. do not particularly show manipulating at least one cellular telecommunication system parameter of the control area in order to bring the load resulting from said manipulation under said stable load capacity limit. However, Khan et al. teach manipulating at least one cellular telecommunication system parameter of the control area in order to bring the load resulting from said manipulation under said stable load capacity limit (fig. 3, steps 46 or 48; see col. 5, lines 29-40); therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Yun et al. as taught by Khan et al. for purpose of increasing

advantageously the chances of making new connection in order to maximize the functionality and profitability of wireless communication system.

Regarding claim 69, Yun et al. and Khan et al. disclose the method according to claim 68. Yun et al. further disclose wherein said step of estimating the result of the admittance of the new bearer on the available capacity of the control area comprises the step of: determining a probability that a load comprising existing bearers and the requested bearer would exceed a predetermined system reliability limit ("NO" at step 713 of fig. 7).

Regarding claim 73, Yun et al. and Khan et al. disclose the method according to claim 68. Yun et al. further disclose wherein said step of estimating the result of the admittance of the new bearer on the available capacity of the control area comprises the step of: determining whether an estimated load comprising existing bearers and the requested bearer would exceed a predetermined system capacity limit ("NO" or "YES" at step 713 of fig. 7).

Regarding claim 75, Yun et al. and Khan et al. disclose the method according to claim 68. Khan et al. further disclose wherein said step of manipulating at least one cellular telecommunication system parameter comprises the step of: manipulating at least one cellular telecommunication system parameter of a real-time bearer (fig. 3, steps 46 or 48; see col. 5, lines 29-40).

Regarding claim 76, Yun et al. and Khan et al. disclose the method according to claim 68. Yun et al. further disclose if (i) the requested bearer is an emergency call (same as regular call), and (ii) if the estimated results show that a critical load capacity threshold will not be exceeded by the admittance of the new bearer, admitting said bearer and allocating transmission resources according to said request (fig. 7, steps 711 and 714).

Regarding claim 79, Yun et al. and Khan et al. disclose the method according to claim 68. Khan et al. further disclose wherein said step of manipulating at least one cellular telecommunication system parameter (fig. 3, steps 46 or 48; and see col. 5, lines 14-40) comprises the step of: manipulating at least one cellular telecommunication system parameter within a type of cellular telecommunication system parameter (col. 4, lines 45-62).

Regarding claim 80, Yun et al. and Khan et al. disclose the method according to claim 79. Khan et al. further disclose wherein the type of cellular telecommunication system parameter comprises one of handover control parameters, power control parameters, load control parameters, soft handover and/or soft capacity margins, and parameters of the requested bearer (col. 4, lines 45-62).

Regarding claim 81, Yun et al. and Khan et al. disclose the method according to claim 79. Yun et al. further disclose wherein said type of cellular telecommunication system parameter is predetermined (fig. 7 and its description).

Regarding claim 83, Yun et al. and Khan et al. disclose the method according to claim 79. Khan et al. further disclose wherein said step of manipulating at least one cellular telecommunication system parameter (fig. 3, steps 46 or 48; and see col. 5, lines 14-40) within a type of cellular telecommunication system parameter comprises the step of: selecting the type of cellular telecommunication system parameter within which is the at least one cellular telecommunication system parameter (col. 4, lines 45-62).

Regarding claim 84, Yun et al. and Khan et al. disclose the method according to claim 83. Yun et al. further disclose wherein the type is selected based on an amount the stable load capacity threshold was exceeded (fig. 7 and its description).

Regarding claim 85, Yun et al. and Khan et al. disclose the method according to claim 83. Khan et al. further disclose wherein the type is selected at random (col. 5, line 12).

Regarding claim 88, Yun et al. and Khan et al. disclose the method according to claim 68. Yun et al. further disclose wherein said control area comprises a sector of a

cell, a cell, a plurality of cells, a routing area, and/or an entire radio access network (fig. 3c-3b; and their descriptions).

Regarding claim 89, Yun et al. and Khan et al. disclose the method according to claim 68. Yun et al. further disclose wherein the stable load capacity threshold is an upper limit of transmission load capacity of a stable load region within which the system can handle all traffic (fig. 7 and its description).

5. Claims 7, 36, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yun et al. (US-5,886,988) and Khan et al. (US-6,400,954) and further in view of Frodigh et al. (US-6,381,458).

Regarding claim 7, Yun et al. and Khan et al. disclose the method according to claim 1. But, Yun et al. and Khan et al. do not particularly show wherein said step of attempting the release of transmission capacity resources comprises the step of adjusting handover control parameters of the cellular network. However in analogous art, Frodigh et al. teach wherein said step of attempting the release of transmission capacity resources comprises the step of adjusting handover control parameters of the cellular network (fig. 3, step 420; and see col. 6, line 29-col. 7, line 25). Since, Yun et al., Khan et al. and Frodigh et al. are related to the method for admission control in a cellular telecommunication system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Yun et al. and Khan et al. as taught by Frodigh et al. for purpose of increasing

advantageously the chances of making new connection in order to maximize the functionality and profitability of wireless communication system by specifically using the handoff technique.

Regarding claim 36, Yun et al., Khan et al. and Frodigh et al. disclose the method according to claim 7. Frodigh et al. further disclose wherein the handover control parameters comprise parameters which define thresholds for triggering a handover from one cell to another (fig. 3, step 420; and see col. 6, line 29-col. 7, line 25).

Regarding claim 44, Yun et al., Khan et al. and Frodigh et al. disclose the method according to claim 7. Yun et al. further disclose wherein the step of adjusting power control parameters (SINR threshold level is assigned; see col. 22, lines 30-33) of the cellular network comprises the step of: transmitting, by an admission control entity, a message to a power control entity, wherein said message comprises an instruction to update at least one power control parameter (col. 22, lines 30-37).

Regarding claim 45, Yun et al., Khan et al. and Frodigh et al. disclose the method according to claim 44. Yun et al. further disclose wherein the step of adjusting power control parameters of the cellular network further comprises the step of: receiving, by the admission control entity, an acknowledgment message from the power control entity (obviously to comparison step, see col. 22, lines 30-37); and checking, by an admission control entity, a current load (fig. 7, step 712).

6. Claim 8, 10, 31, 32, 37, 38 and 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yun et al. (US-5,886,988) and Khan et al. (US-6,400,954) and further in view of Hall (US-5,475,861).

Regarding claim 8, Yun et al. and Khan et al. disclose the method according to claim 1. But, Yun et al. and Khan et al. do not particularly show wherein said step of attempting the release of transmission capacity resources comprises the step of a adjusting power control parameters of the cellular network. However in analogous art, Hall teaches wherein said step of attempting the release of transmission capacity resources comprises the step of a adjusting power control parameters of the cellular network (fig. 8; and see col. 9, lines 26-53). Since, Yun et al., Khan et al. and Hall are related to the method for admission control in a cellular telecommunication system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Yun et al. and Khan et al. as taught by Hall for purpose of increasing advantageously the chances of making new connection in order to maximize the functionality and profitability of wireless communication system by specifically using the power control technique.

Regarding claim 37, Yun et al., Khan et al. and Hall disclose the method according to claim 8. Hall further discloses wherein the power control parameters comprise an upper limit and/or a lower limit of transmission power margins of existing connections (fig. 8; and see col. 9, lines 26-53).

Regarding claim 10, Yun et al. and Khan et al. disclose the method according to claim 1. But, Yun et al. and Khan et al. do not particularly show wherein said step of attempting the release of transmission capacity resources comprises the step of: adjusting soft capacity margins of the cellular network. However, Hall teaches wherein said step of attempting the release of transmission capacity resources comprises the step of: adjusting soft capacity margins of the cellular network. (fig. 8; and see col. 9, lines 26-53). Since, Yun et al., Khan et al. and Hall are related to the method for admission control in a cellular telecommunication system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Yun et al. and Khan et al. as taught by Hall for purpose of increasing advantageously the chances of making new connection in order to maximize the functionality and profitability of wireless communication system by specifically using the power control technique.

Regarding claim 31, Yun et al. and Khan et al. disclose the method according to claim 30. But, Yun et al. and Khan et al. do not particularly show wherein the critical load region is used as a soft capacity margin for the control area. However, Hall teaches wherein the critical load region is used as a soft capacity margin for the control area (fig. 8; and see col. 9, lines 26-53). Since, Yun et al., Khan et al. and Hall are related to the method for admission control in a cellular telecommunication system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made

to modify the system of Yun et al. and Khan et al. as taught by Hall for purpose of increasing advantageously the chances of making new connection in order to maximize the functionality and profitability of wireless communication system by specifically using the power control technique.

Regarding claim 32, Yun et al., Khan et al. and Hall disclose the method according to claim 30. Hall further discloses wherein the predetermined limit is the upper limit of the stable load region (fig. 8; and see col. 9, lines 26-53).

Regarding claim 38, Yun et al., Khan et al. and Hall disclose the method according to claim 10. Hall further discloses wherein the step of adjusting soft handover and/or soft capacity margins comprises the step of: adding or deleting a branch of an existing bearer (fig. 10, step 101).

Regarding claim 90, Yun et al., Khan et al. and Hall disclose the method according to claim 80. Hall further discloses wherein a critical load region above the stable load region and below an overload region is used as a soft capacity margin (step 73 of fig. 8, and its description).

7. **Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yun et al. (US-5,886,988) and Khan et al. (US-6,400,954) and further in view of I et al. (US-6,088,335).**

Regarding claim 12, Yun et al. and Khan et al. disclose the method according to claim 3. Yun et al. further disclose wherein, if the resulting load is larger than said predetermined limit (fig. 7 and its description). But, Yun et al. and Khan et al. do not particularly show scheduling the bearer request for later action. However, I et al. teach wherein scheduling the bearer request for later action (col. 8, lines 17-45). Since, Yun et al., Khan et al. and I et al. are related to the method for cellular telecommunication system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Yun et al. and Khan et al. as taught by I et al. for purpose of minimizing significantly in unsuccessful connecting calls.

8. **Claims 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yun et al. (US-5,886,988) in view of Khan et al. (US-6,400,954) and further in view of Yegani et al. (US-6,597,920).**

Regarding claim 41, Yun et al. and Khan et al. disclose the system according to claim 40. But, Yun et al. and Khan et al. do not particularly show wherein the step of admitting the bearer request comprises the step of: transmitting, by the admission control entity, an acknowledgment message to a bearer management entity. However, Yegani et al. teach transmitting, by the admission control entity (BS), an acknowledgment message to a bearer management entity (MS) (fig. 17, lines 26-35). Since, Yun et al., Khan et al. and Kikuchi et al. are related to the method for cellular telecommunication system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Yun et al. and Khan et al. as taught by

Kikuchi et al. for purpose of increasing advantageously the quality and reliability of wireless communication service.

9. **Claims 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yun et al. (US-5,886,988) in view of Khan et al. (US-6,400,954) and further in view of Kikuchi et al. (US-6,529,489).**

Regarding claim 58, Yun et al. and Khan et al. disclose the system according to claim 56. Yun et al. further disclose a load control entity for controlling the transmission capacity of the control area (fig. 7 and its description). But, Yun et al. and Khan et al. do not particularly show receiving a query message from the admission control entity, and for transmitting a message bearing information about the current load to the admission control entity based on the received query message. However, Kikuchi et al. teach wherein receiving a query message for information about the handover can be accepted (fig. 9 and its description). Since, Yun et al., Khan et al. and Kikuchi et al. are related to the method for cellular telecommunication system; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Yun et al. and Khan et al. as taught by Kikuchi et al. for purpose of increasing advantageously the quality and reliability of wireless communication service.

Regarding claim 59, Yun et al. and Khan et al. disclose the system according to claim 58. Kikuchi et al. further disclose wherein the admission control entity transmits

said query message at least whenever a new bearer request is received or a new bearer is admitted (fig. 9 and its description).

Allowable Subject Matter

10. Claims 19, 23, 24, 34, 49-55, 60-63, 70-72, 74, 77, 78, 82, 86 and 87 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 19, the applied references fail to disclose or render obvious the claimed limitations that wherein parameters affecting non-real-time bearers are modified before parameters affecting real-time bearers.

Regarding claim 23, the applied references fail to disclose or render obvious the claimed limitations that wherein a type of cellular network parameter is selected in the steps of selecting, and said step of selecting, again, at least one cellular network parameter or type of cellular network parameter to modify comprises the steps of: determining whether all available types of parameters have been modified; and if all have not been modified, selecting a type of parameter to modify from a group consisting of types of parameters which have not been modified.

Regarding claim 34, the applied references fail to disclose or render obvious the claimed limitations that wherein the step of calculating a preliminary load estimate comprises the step of: calculating Preq + Poc

Regarding claim 49, the applied references fail to disclose or render obvious the claimed limitations that least one of the following steps: setting, by an admission control entity, a bit error rate for outer loop power control; setting, by the admission control entity, a frame error rate for outer loop power control; and/or setting, by the admission control entity, initial signal-to-noise setpoints for outer loop power control.

Regarding claim 50, the applied references fail to disclose or render obvious the claimed limitations that comprising the step of: setting, by an admission control entity, a power margin for transmission power of a multidiversity bearer of the mobile station having a specified quality of service.

Regarding claim 60, the applied references fail to disclose or render obvious the claimed limitations that a power control entity for controlling power levels of mobile stations and base stations in the control area, for receiving an update message from the admission control entity after a new bearer has been admitted, for updating power levels to account for the changed transmission environment based on said update message, for receiving a command message from the admission control entity indicating that at least one power control parameter should be adjusted, and for

transmitting an acknowledgment message to the admission control entity indicating that either a command message or an update message was received from the admission control entity.

Regarding claim 62, the applied references fail to disclose or render obvious the claimed limitations that a handover control entity for controlling handovers between cells when a mobile station moves from one cell to another, for receiving an update message from the admission control entity after a new bearer has been admitted, for updating handover control parameters to account for the changed transmission environment based on said update message, for receiving a command message from the admission control entity indicating that at least one handover control parameter should be optimized, and for transmitting an acknowledgment message to the admission control entity indicating that either a command message or an update message was received from the admission control entity.

Regarding claim 70, the applied references fail to disclose or render obvious the claimed limitations that wherein said probability that the load comprising existing bearers and the requested bearer would exceed the predetermined system reliability limit is determined according to the requirement that:

PROB (Coc>= Ctot) <=γ

Regarding claim 74, the applied references fail to disclose or render obvious the claimed limitations that wherein said step of determining whether an estimated load comprising existing bearers and the requested bearer would exceed the predetermined system capacity limit is determined according to the requirement that:

Preq + Poc<= Pstable

Regarding claim 77, the applied references fail to disclose or render obvious the claimed limitations that wherein said step of manipulating at least one cellular telecommunication system parameter comprises the step of: maintaining a priority hierarchy among requested and existing bearers such that higher priority bearers are affected less than lower priority bearers when at least one cellular telecommunication system parameter is manipulated.

Regarding claim 82, the applied references fail to disclose or render obvious the claimed limitations that wherein said step of manipulating at least one cellular telecommunication system parameter comprises the steps of: manipulating at least one cellular telecommunication system parameter of a first predetermined type; estimating a result of the admittance of the new bearer on the available capacity of the control area, said available capacity having changed because of the manipulation of the at least one cellular telecommunication system parameter; if the estimated results show that a stable load capacity threshold will not be exceeded by the admittance of the new bearer, admitting said bearer and allocating transmission resources according to said request;

and if the estimated results show that the stable load capacity threshold will be exceeded by the admittance of the new bearer, manipulating at least one cellular telecommunication system parameter of a second predetermined type.

Regarding claim 86, the applied references fail to disclose or render obvious the claimed limitations that selecting the type of cellular telecommunication system parameter comprises the step of: selecting the type of cellular telecommunication system parameter based on a priority hierarchy among requested and existing bearers so that higher priority bearers are affected less than lower priority bearers when at least one cellular telecommunication system parameter is manipulated..

Regarding claim 87, the applied references fail to disclose or render obvious the claimed limitations that wherein said step of selecting the type of cellular telecommunication system parameter comprises the step of: selecting a first type of cellular telecommunication system parameter; wherein said step of manipulating at least one cellular telecommunication system parameter comprises the step of: manipulating at least one cellular telecommunication system parameter of the selected first type;

estimating a result of the admittance of the new bearer on the available capacity of the control area, said available capacity having changed because of the manipulation of the at least one cellular telecommunication system parameter;

if the estimated results show that a stable load capacity threshold will not be exceeded by the admittance of the new bearer, admitting said bearer and allocating transmission resources according to said request; and

if the estimated results show that the stable load capacity threshold will be exceeded by the admittance of the new bearer, selecting a second type of at least one cellular telecommunication system parameter to be modified.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy Q Phan whose telephone number is 571-272-7924. The examiner can normally be reached on 8AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kincaid G Lester can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Huyphan

SONNY TRINH
PRIMARY EXAMINER

Examiner: Phan, Huy Q. AU: 2687 Date: Apr. 09, 2005